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Federal Communications Commission
Office of Secretary

William F. Caton
Acting Secretary
Federal Communications Commission
Washington, D.C. 20554

Re: Ex Parte Submission
Federal-State Joint Board on Universal Service; CC Docket No. 96-45

Dear Mr. Caton:

Attached is a paper explaining why the Hatfield model is a superior tool for use in setting the universal service support amount. Please associate this filing with the above-captioned docket.

Respectfully submitted,

Chris Frentrup

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CC: Joint Board Staff and Commissioners

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The BCPM Suffers from Structural Infirmities that Make It Completely Unsuitable for Use as a National USF Tool

In its "Report on the Use of Proxy Cost Models" of March 26th, the State Joint Board Staff have suggested that to focus policy makers' future attention, a single model should be selected now for ongoing consideration.

If a model is to be selected now, in advance of its specification being finalized, two items are critical. First, the chosen model must be as flexible as possible to ensure that as Federal and State regulators refine and finalize their requirements for an effective tool, the model will be able to accommodate and reflect these changes. And second, regulators must be convinced that the sponsors of the model will cooperate to adjust the specification of the model to meet final requirements. On both of these counts, the Hatfield model is superior to the BCPM.

First, the BCPM is so structurally rigid, and has so many of its critical inputs hard-coded into the model, that it is unlikely to be able to accommodate the adjustments that regulators will likely demand. Some examples of these structural rigidities are as follows:

Adjustment for empty area. In the BCPM, these adjustments are collected as undocumented proprietary inputs from US West. The model itself has no facility to adjust for empty area other than by directed "shrinkage" of the square mileage of a CBG – an action that distorts completely the calculation of cable run distances.

Reflection of population clustering. While the BCPM does assume that rural populations are clustered along roads, the implementation of this in the BCPM is completely undocumented. Even more seriously, the BCPM contains no facility to determine (and engineer cable to) populations that are clustered in towns as opposed to those along roads in low density areas. Thus, in rural areas, the BCPM cannot reflect accurately the efficient engineering of telecommunications plant.

Length of drops and lot configuration. Because the BCPM does not make length of drop wire a user-adjustable input, it calculates an average drop length of over 300 feet based on its extreme and hard-coded assumptions about lot configurations and empty area. Thus, users are not permitted to adjust this figure (which accounts for over 20% of BCPM loop investment) to anything approaching the 73 foot average length reported by Bellcore.

Development of switching and interoffice costs. The BCPM models only the loop network and a crude lines-driven version of end office switching. However, local telephone companies differ greatly in the cost of their interoffice networks (e.g., a LEC that serves a large, sparsely populated area has much higher interoffice costs than a LEC that serves a dense urban area). Thus, the BCPM is structurally incapable of capturing these very real cost differences. Similarly, because the BCPM assumes that all lines (residence and business) generate the same network loads (call attempts, time of day patterns, feature demand, etc.) the switches that it costs are excessively expensive for residential areas, and are inadequately powered to serve business districts.

Development of operating expenses. The BCPM uses proprietary data supplied by a self-selected

collection of LECs to determine operating expenses. BCPM assumes these expenses (which amount to $11.34 per line per month – over 1/3 of BCPM's total costs) to be identical for all lines, and for all LECs. While it is ludicrous to assume that the per line operating, maintenance and repair expenses for a smaller LEC whose loops average 18,000 feet in length are equal to those for a large urban LEC whose loops average 8,000 feet in length, the BCPM includes no capability either to model diverse expense drivers (e.g., loop length, population density, labor rate differences), or to accommodate different expense levels for different LECs or line types.

In contrast to the BCPM, the Hatfield Model is much more flexible. It allows regulators to specify precise treatments for all of the above critical modeling issues. This was recently proven when the Hatfield sponsors demonstrated that when BCPM input parameter values were inserted into the Hatfield Model, the model generated basic local service costs that matched those generated by the BCPM to within a couple of percent. The converse does not appear to be true. Because the BCPM incorporates such a rigid and rudimentary model structure, it appears to be impossible for regulators to adjust inputs to the BCPM to mimic outputs from the Hatfield Model – or even to cause the BCPM to generate cost outputs that reflect the rich differences of cost environments facing different LECs.

The second issue that should be of concern for policy makers is whether adoption of a particular model will hold the regulatory process hostage to decisions of the LECs to withhold needed information. Because the BCPM does not model switching or operating expenses, but rather requires these costs to be entered as "inputs" into the model, a regulator choosing to use the BCPM will have to rely on each LEC to provide (hopefully on a perfectly consistent basis) values for these inputs that amount to roughly 50% of the total costs identified by the BCPM. Or, in the alternative, to develop density zone, wire center or CBG-specific switching and operating expenses for each LEC study area in the country. If LEC cooperation is not forthcoming, or, even worse, if some LECs figure out how to "game" the values for these critical inputs, the integrity of the universal service process disintegrates. It is noteworthy that the BCPM's sponsors have so far withheld from regulatory or other public inspection the processes and evidence used to develop these "inputs." If regulators designate the BCPM as their preferred model, it seems unlikely that the BCPM's sponsors would offer increased cooperation.

In contrast to the uncomfortable situation that regulators may face if they decide to "put their eggs" in the BCPM basket, choosing the Hatfield Model provides a no risk option. Its structure is so flexible that it can subsume the BCPM, all of its inputs are public, and the evidence supporting them is completely open to scrutiny. Furthermore, it is the only model that examines the complete costs of basic service – and on a disaggregated basis that permits USF support to be targeted to LECs, density zones, wire centers or CBGs that are truly needy. While it certainly would be desirable if regulators currently had a choice between two flexible models that could meet their needs for accurate determination and fair allocation of universal service support, only one such model – Hatfield – presently exists. Furthermore, the incompleteness and structural rigidities that are inherent in the BCPM preclude it from being easily adapted to meet the Joint Board's specifications – even if its sponsors (who are largely fund recipients) now decide that it is in their best interest to adjust the model and to document and open the model's proprietary inputs to public inspection.